Project Name		
Energy Eff	iciency	Worksheets (Check-mark as appropriate)
	L-1	Index Sheet - Energy Conservation
	L-2	Mandatory Controls - Locations and Types
	L-3	Lighting Schedule
	L-4	Interior Lighting Power Allowance
	L-5	Exterior Lighting Summary Worksheet
	L-6	Exterior Lighting Summary Worksheet
	L-7	Installed Exterior Lighting Allowance Worksheet
Worksheets I	-2 or sin L-3 to L	ormation: nilar information is required on the drawings or on a separate form for all lighting energy submittals. 7 are optional. The information may be included on the drawings, or as part of COMcheck* calculation is may be added if needed.
		Per SPS 361.20(2), plans, specifications, and calculations require the original signature and seal of a Wisconsin Registered Architect, Professional Engineer, or Electrical Designer per SPS 361.31(1), or an original signature and credential identification number of the Master Electrician who designs and installs the system.
Ink signa stamp or I	Master E	Please print name and telephone number of signer d either registration electrician credential ember

recent version of COMcheck must be used to demonstrate IECC compliance with lighting in Wisconsin.

COMcheck may be found at: http://www.energycodes.gov/comcheck/index.stm

*COMcheck is a federal Department of Energy computer program that can be used to demonstrate energy conservation code compliance online. The program may be downloaded to individual computers. The most

Mandatory Controls and Locations

Mandatory Provisions Checklist		
□ Each space enclosed by ceiling-height partitions has an independent, accessible control that operates general lighting in the space. □ Exception: The control is located in a remote location for safety or security reasons. □ Exception: The control addresses stairways or corridors that are elements of means of egress □ Light reduction controls capable of reducing connected lighting by 50% installed. □ Exception: Single luminaire. □ Exception: Area controlled by occupancy sensor □ Exception: Corridors, restrooms, or public lobbies □ Exception: Sleeping unit □ Exception: Spaces that use less than 0.6 W/sf □ Automatic lighting shutoff controls are provided based on either a scheduling device or an occupant sensor. □ Exception: Sleeping unit □ Exception: Sleeping unit □ Exception: Sleeping unit □ Exception: Space for patient care. □ Exception: Space where automatic lighting shutoff would endanger safety or security.	□ Spaces, not exceeding 25,000 sf and are not more than one floor, are independently programmed. □ Occupant override installed on automatic time switch control device which is accessible, located so the person using the device can see the lights controlled or is annunciated, manually operated, remains on for no more than 2 hrs, controls an area not exceeding 5,000 sf. □ Exception: Use of captive-key override permitted to exceed 2 hours for special occupancies □ Exception: Special occupancies shall not exceed 20,000 sf. □ Automatic time switch incorporates an automatic holiday scheduling feature. □ Daylight zones provided with independent controls. □ Exception: Space has 2 or fewer light fixtures. □ Exception: Space is less than 250 sf. □ Exception: Spaces that use less than 0.6 W/sf.	□ Hotel/motel guest rooms have a master switch at the main entry; while suites have switch at the entry to each room or at the primary entry to the suite. □ Either a photosensor or an astronomical time switch controls exterior lighting applications. □ Exception: Lights must remain on for safety, security or eye adaptation reasons. □ Exterior building grounds luminaires greater than 100 W have lamps with minimum efficacy of 60 lumens/W. □ Exception: Luminaire is activated with a motion sensor. □ Display lighting has a separate control. □ Case lighting has a separate control. □ Two-lamp tandem-wired ballasts. □ Exit signs do not exceed 5 W per face.

Control Location (Name and/or Room #)	Space Controlled	Control Type (Occupancy Sensor, Duel Switches, Dimmer Switch, Photosensor, Time Clock, etc)	Control Purpose (Interior Lighting Control, Light Reduction, Automatic Shut-Off, Daylight Zone, Display, etc)

Lighting Schedule

	g Schedule	T		•	
A	В	C	D	E	F
Fixture ID	Luminaire Description including Fixture Type, Lamp, Wattage per lamp, Ballast*	Lamps/ Fixture	# of Fixture	Fixture Watts	D x E
		· .	TOTAL	_ \/\/.a++c	

Interior Lighting Power Allowance IECC 505.5.2 based on Area Method

Note: If using ASHRAE 90.1-2007, allowable watts/sq ft will vary. Use ASHRAE 90.1 - Table Section 9.6.1 and revise as needed depending on use of Building Area Method or Space-by-Space Method.

A	В	C	D
Building Area Type	Watts/ft ²	Area (sq. ft)	Allowed Watts
Automotive Facility	0.9		
Convention Center	1.2		
Court House	1.2		
Dining: Bar Lounge/Leisure	1.3		
Dining: Cafeteria/Fast Food	1.4		
Dining: Family	1.6		
Dormitory	1.0		
Exercise Center	1.0		
Gymnasium	1.1		
Healthcare-Clinic	1.0		
Hospital	1.2		
Hotel	1.0		
Library	1.3		
Manufacturing Facility	1.3		
Motel	1.0		
Motion Picture Facility	1.3		
Multi-Family	0.7		
Museum	1.1		
Office	1.0		
Parking Garage	0.3		
Penitentiary	1.0		
Performing Acts Theater	1.6		
Police/Fire Station	1.0		
Post Office	1.1		
Religious Building	1.3		
Retail	1.5		
Retail Display(floor area)	1.6		
Retail Display(display case/shelf area)	3.9		
School/University	1.2		
Sports Arena	1.1		
Town Hall	1.1		
Transportation	1.0		
Warehouse	0.8		
Workshop	1.4		
	TOTALS		

	Ft² Area	Watts
Total Allowed Interior Power Allowance	W > Proposed Interior Lighting	W

Exterior Lighting Power Allowance IECC 505.6.2

TABLE 505.6.2(1) EXTERIOR LIGHTING ZONES

INDICATE	DESCRIPTION		
LIGHTING ZONE			
<u> </u>	Developed areas of national parks, state parks, forest land, and rural areas.		
□ 2	Areas predominantly consisting of residential zoning, neighborhood business districts, light		
	industrial with limited nighttime use and residential mixed use areas.		
□ 3	All other areas		
□ 4	High-activity commercial districts in major metropolitan areas as designated by the local		
	land use planning authority		

TABLE 505.6.2(2) INDIVIDUAL LIGHTING POWER ALLOWANCES FOR BUILDING EXTERIORS

		Zone 1	Zone 2	Zone 3	Zone 4
Base Site Allowance (Base allowance may be used in tradable or nontradable surfaces.)		500 W	600 W	750 W	1300 W
		Unco	vered Parking Arc	eas	
	Parking areas and drives	0.04 W/ft ²	0.06 W/ft ²	0.10 W/ft ²	0.13 W/ft ²
		В	uilding Grounds		
	Walkways less than 10 feet wide	0.7 W/linear foot	0.7 W/linear foot	0.8 W/linear foot	1.0 W/linear foot
Tradable Surfaces (Lighting power densities for uncovered	Walkways 10 feet wide or greater, plaza areas special feature areas	0.14 W/ft ²	0.14 W/ft ²	0.16 W/ft ²	0.2 W/ft ²
parking areas, building grounds, building	Stairways	0.75 W/ft ²	1.0 W/ft ²	1.0 W/ft ²	1.0 W/ft ²
entrances and exits,	Pedestrian tunnels	0.15 W/ft ²	0.15 W/ft ²	0.2 W/ft ²	0.3 W/ft ²
canopies and overhangs and outdoor	Building Entrances and Exits				
sales areas may be traded.)	Main entries	20 W/linear foot of door width	20 W/linear foot of door width	30 W/linear foot of door width	30 W/linear foot of door width
	Other doors	20 W/linear foot of door width	20 W/linear foot of door width	20 W/linear foot of door width	20 W/linear foot of door width
	Entry canopies	0.25 W/ft^2	0.25 W/ft ²	0.4 W/ft ²	0.4 W/ft ²
	Sales Canopies				
	Free-standing and attached	0.6 W/ft ²	0.6 W/ft ²	0.8 W/ft ²	1.0 W/ft ²

TABLE 505.6.2(2) Continued

	Outdoor Sales					
Tradable Surfaces	Open areas (including vehicle sales lots)	0.25 W/ft ²	0.25 W/ft ²	0.5 W/ft ²	0.7 W/ft ²	
	Street frontage for vehicle sales lots in addition to "open area" allowance	No allowance	10 W/linear foot	10 W/linear foot	30 W/linear foot	
Non-Tradable Surfaces	Building facades	No allowance	0.1 W/ft ² for each illuminated wall or surface or 2.5 W/linear foot for each illuminated wall or surface length	0.15 W/ft ² for each illuminated wall or surface or 3.75 W/linear foot for each illuminated wall or surface length	0.2 W/ft² for each illuminated wall or surface or 5.0 W/linear foot for each illuminated wall or surface length	
(Lighting power density calculations for the following applications can be used only for the specific application and cannot be traded between	Automated teller machines and night depositories	270 W per location plus 90 W per additional ATM per location	270 W per location plus 90 W per additional ATM per location	270 W per location plus 90 W per additional ATM per location	270 W per location plus 90 W per additional ATM per location	
surfaces or with other exterior lighting. The following allowances are in addition to any	Entrances and gatehouse inspection stations at guarded facilities	0.75 W/ft ² of covered and uncovered area	0.75 W/ft ² of covered and uncovered area	0.75 W/ft ² of covered and uncovered area	0.75 W/ft ² of covered and uncovered area	
allowance otherwise permitted in the "Tradable Surfaces" section of this table.)	Loading areas for law enforcement, fire, ambulance and other emergency service vehicles	0.5 W/ft ² of covered and uncovered area	0.5 W/ft ² of covered and uncovered area	0.5 W/ft ² of covered and uncovered area	0.5 W/ft ² of covered and uncovered area	
	Drive-up windows/doors	400 W per drive-through	400 W per drive-through	400 W per drive-through	400 W per drive-through	
	Parking near 24- hour retail entrances	800 W per main entry	800 W per main entry	800 W per main entry	800 W per main entry	

Tradable Exterior Lighting Power Allowance IECC 505.6.2

Tradable Exterior Lighting Fower Allowance IECC 303.0.2					
A	В	C	D		
Tradable Surfaces	Allowance	Area or Linear Feet in	Total		
Area Description	(Table 505.6.2)	Proposed Design	(B X C)		
		Total Watts			

Non-Tradable Exterior Lighting Power Allowance IECC 505.6.2

A	В	C	D
Non-Tradable Surfaces Area Description	Allowance (Table 505.6.2)	Area or Linear Feet in Proposed Design	Total (B X C)
		Total Wattage	

Tradable Installed Exterior Lighting Power IECC 505.6

A	В	C	D
Fixture Type	Number of Luminaires Installed	Watts per Luminaire (including ballast)	Installed Watts (B X C)
		Total Watts	

Total Allawad Exterior Dawar Allawanaa	W. Dranged Exterior Limbting	\A/
Total Allowed Exterior Power Allowance	W > Proposed Exterior Lighting	VV

Forms for use with ASHRAE 90.1-2007 as allowed by IECC 501.2, may be downloaded for use at: http://www.ashrae.org/technology/page/97